

REMARKS

This Amendment cancels claims 19 and 20, and amends claims 1, 3, 8, 17 and 18. Support for the claim amendments is found, for example, in the cancelled claims. Claims 1-18 remain in the application.

Claims 19 and 20 stand allowed. Applicants have cancelled allowable claim 19 and added limitations therefrom to independent claims 1 and 17, respectively. Additionally, Applicants cancelled allowable claim 20 and added limitations therefrom to independent claims 8 and 18, respectively. Therefore, independent claims 1, 8, 17 and 18 as amended are now in condition for allowance.

Claims 2-7, 9, 10, 12 and 13 depend from amended independent claim 1. Claims 11 and 14-16 depend from amended independent claim 8. Therefore, claims 2-7 and 9-16 are also in condition for allowance. Allowance of claims 1-18 is respectfully requested.

In view of the above amendments and remarks, claims 1-18 as amended are in condition for allowance. Reconsideration of the rejections and allowance of claims 1-18 are respectfully requested.

Respectfully submitted,

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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claim 1 (currently amended): A method for manufacturing an aluminum cast product enclosing a pipe inserted therein, which comprises the steps of:

projecting a controlling member into a cavity of a mold;

arranging a pipe at a predetermined position in said cavity of said mold;

holding a portion of said pipe in said the cavity by receiving the portion of said pipe in a groove of a core member, a portion of the core received within the cavity;

~~insertion of~~ inserting said controlling member into at least one opening of said pipe or insertion of at least one end of said pipe ~~in to~~ into a hole of said controlling member; and

pouring a molten aluminum alloy into said cavity so as to enclose said pipe with said aluminum alloy, wherein said pipe is free to move in an axial direction relative to said mold until said aluminum alloy hardens.

Claim 2 (original): The method defined in claim 1, wherein said controlling member is adjustably provided toward a center of the cavity.

Claim 3 (currently amended): The method defined in claim 1, wherein the controlling member has a tip inserted ~~to~~ into the opening of the pipe.

Claim 4 (original): The method defined in claim 3, wherein the controlling member is stepped at a middle part toward the tip.

Claim 5 (original): The method defined in claim 3, wherein the pipe has the opening whose inner surface is chamfered.

Claim 6 (original): The method defined in claim 1, wherein the controlling member has a hole to which an end of the pipe is inserted.

Claim 7 (previously presented): The method defined in claim 1, wherein the controlling member has a surface layer which endures a high-temperature atmosphere caused by pouring the molten aluminum alloy, wherein the surface layer is comprised of elements or compounds selected from the group consisting of Ti, TiN, TiC, CrN and BN.

Claim 8 (currently amended): A method for production of aluminum cast product enclosing a pipe therein, which comprises the steps of:

coupling a bracket having a hole to a pipe;

arranging said pipe at a predetermined position in a cavity of a mold;

holding a portion of said pipe in said the cavity by receiving the portion of said pipe in a groove of a core member, a portion of the core received within the cavity;

inserting a controlling pin, which extends through a wall of the mold to the said cavity, into said hole of said bracket; and

pouring a molten aluminum alloy into said cavity so as to enclose said pipe with said aluminum alloy, wherein said pipe is free to move in an axial direction relative to said mold until said aluminum alloy hardens.

Claim 9 (previously presented): The method defined in claim 1, wherein compressed gas is supplied to the pipe during pouring of the molten aluminum alloy.

Claim 10 (previously presented): The method defined in claim 1, wherein a plug is attached to an open end of the pipe.

Claim 11 (previously presented): The method defined in claim 8, wherein compressed gas is supplied to the pipe during pouring of the molten aluminum alloy.

Claim 12 (previously presented): The method defined in claim 9, wherein the compressed gas is a cool gas.

Claim 13 (previously presented): The method defined in claim 12, wherein the cool gas is an inert gas.

Claim 14 (previously presented): The method defined in claim 11, wherein the compressed gas is a cool gas.

Claim 15 (previously presented): The method defined in claim 14, wherein the cool gas is an inert gas.

Claim 16 (previously presented): The method defined in claim 8, wherein a plug is attached to an open end of the pipe.

Claim 17 (currently amended): A method for manufacturing an aluminum cast product enclosing a pipe inserted therein, which comprises the steps of:

projecting a controlling member into a cavity of a mold;

arranging a pipe at a predetermined position in said cavity of said mold;

holding a portion of said pipe in said the cavity by receiving the portion of said pipe in a groove of a core member, a portion of the core received within the cavity;

~~insertion of inserting~~ said controlling member into at least one opening of said pipe or insertion of at least one end of said pipe ~~in to~~ into a hole of said controlling member; ~~and~~

pouring a molten aluminum alloy into said cavity so as to enclose said pipe with said aluminum alloy, wherein said pipe is free to move in an axial direction relative to said mold until said aluminum alloy hardens; and

wherein said controlling member is configured to allow axial movement of said pipe without radial dislocation.

Claim 18 (currently amended): A method for production of aluminum cast product enclosing a pipe therein, which comprises the steps of:

coupling a bracket having a hole to a pipe;

arranging said pipe at a predetermined position in a cavity of a mold;

holding a portion of said pipe in said the cavity by receiving the portion of said pipe in a groove of a core member, a portion of the core received within the cavity;

inserting a controlling pin, which extends through a wall of the mold to the said cavity, into said hole of said bracket; ~~and~~

pouring a molten aluminum alloy into said cavity so as to enclose said pipe with said aluminum alloy, wherein said pipe is free to move in an axial direction relative to said mold until said aluminum alloy hardens; and

wherein said controlling member is configured to allow axial movement of said pipe without radial dislocation.

Claims 19 and 20 (cancelled).